

REMARKS

The Final Office Action mailed October 14, 2005, has been received and reviewed. Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are currently pending in the application. Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 stand rejected. Applicants propose to amend claims 1 and 18, and respectfully request reconsideration of the application as proposed to be amended herein.

35 U.S.C. § 112 Claim Rejections

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully traverse this rejection, as hereinafter set forth. Applicants have amended independent claims 1 and 18 to clearly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, Applicants assert that presently amended independent claims 1 and 18 are allowable under 35 U.S.C. § 112, second paragraph as well as the dependent claims therefrom.

35 U.S.C. § 103(a) Obviousness Rejections

Obviousness Rejection Based on U.S. Patent 5,655,704 to Sakemi et al. in view of U.S. Patent 5,607,099 to Yeh et al.

Claims 1 through 3, 6, 8, 18 through 20, 23 and 25 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakemi et al. (U.S. Patent 5,655,704) in view of Yeh et al. (U.S. Patent 5,607,099). Applicants respectfully traverse this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable

expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

After carefully considering the cited prior art, the rejections, and the Examiner's comments, Applicants have amended the claimed invention to clearly distinguish over the cited prior art.

Turning to the cited prior art, the Sakemi et al. reference teaches or suggests a solder ball mounting apparatus using a template 4 to position solder balls 3 from a hopper 12 onto pads 2a of a substrate 2. The substrate 2 only having a plurality of electrodes 2a above the surface of the substrate 2, not having any electrodes whatsoever recessed into the surface of the substrate 2. There is no teaching or suggestion in the Sakemi et al. reference to dispense solder paste from the hopper 12 into or through a template 4 onto the substrate 2. There is no teaching or suggestion whatsoever in the Sakemi et al. reference for dispensing solder balls 3 onto electrodes 2a located in recesses in a substrate 2.

The Yeh et al. reference teaches or suggests a carrier device 10 having cavities 12 in a surface for transferring solder paste 14 thereinto to be heated into solder balls 16 to attach the solder balls 16 to the solder pad 20 of a flip chip 18. There is no teaching or suggestion whatsoever in the Yeh et al. reference for dispensing solder balls 16 onto conductive sites located in recesses in a substrate.

Applicants assert that any combination of the Sakemi et al. reference and the Yeh et al. reference does not establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1 and 18 because, at the least, any combination of the Sakemi et al. reference and the Yeh et al. reference fails to teach or suggest all of the claim limitations. Applicants assert that any combination of the Sakemi et al. reference and the Yeh et al. reference fails to teach or suggest the claim limitations of presently amended independent claims 1 and 18 calling for "a stencil plate with upper and lower surfaces, and a pattern of a plurality of through-holes said stencil plate configured to place said plurality of conductive spheres in said pattern on a surface of said substrate, said through holes having a diameter in the range of about two diameters of a conductive sphere to about ten diameters of a

conductive sphere” and “a stencil plate having an upper surface, having a lower surface, having a pattern of a plurality of through-holes, each through-hole having a diameter, said stencil plate configured to position said plurality of conductive spheres in said pattern on a proximate surface of said substrate, said through holes having a diameter in the range of about two diameters of a conductive sphere to about ten diameters of a conductive sphere”.

Applicants assert that neither the Sakemi et al. reference nor the Yeh et al. reference nor any combination of the Sakemi et al. reference and the Yeh et al. reference contains any disclosure whatsoever regarding such claim limitations. Therefore, any combination of such prior art cannot establish a *prima facie* case of obviousness under 35 U.S.C. § 103 regarding the claimed inventions of presently amended independent claims 1 and 18. Accordingly, presently amended independent claims 1 and 18 are allowable as well as dependent claims 2, 3 5, 6, 8, 19, 20, and 22 through 25 therefrom.

Obviousness Rejection Based on U.S. Patent No. 5,655,704 to Sakemi et al. in view of U.S. Patent No. 5,607,099 to Yeh et al.

Claims 5 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sakemi et al. (U.S. Patent 5,655,704) in view of Yeh et al. (U.S. Patent 5,607, 099).

Applicants again assert that to establish a *prima facie* case of obviousness under 35 U.S.C. § 103 three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the cited prior art reference must teach or suggest all of the claim limitations. Furthermore, the suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on Applicants’ disclosure.

Applicants assert that dependent claims 5 and 22 are allowable as depending from allowable presently amended independent claims 1 and 18 for the reasons set forth above.

ENTRY OF AMENDMENTS

The proposed amendments to claims 1 and 18 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application to clearly comply with the provisions of 35 U.S.C. § 132. Further, the amendments are timely filed, place the application in condition for allowance, and do not raise new issues or require a further search. Finally, if the Examiner determines that the amendments do not place the application in condition for allowance, entry is respectfully requested upon filing of a Notice of Appeal herein.

CONCLUSION

Claims 1 through 3, 5, 6, 8, 18 through 20, 22, 23 and 25 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,



James R. Duzan
Registration No. 28,393
Attorney for Applicants
TRASKBRITT
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: December 9, 2005
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Document in ProLaw